

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

Applicant: Hsiao et al.  
Serial No: 09/595,713  
Filing Date: June 16, 2000  
Title:



Atty Docket: SJO990202US1  
Art Unit: 1746  
Examiner: Olsen, Allan W.

**"MAGNETIC HEAD P1 MAGNETIC POLE NOTCHING WITH  
REDUCED POLYMER DEPOSITION"**

Box Non Fee Amendment  
Commissioner for Patents  
Washington, D.C. 20231

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**AMENDMENT**

Sir:

Responsive to the Office Action mailed February 21, 2002, please amend the above-identified application as follows:

**In the Specification**

Please replace the paragraphs in the specification with like numbered paragraphs set forth below; a marked up version of these paragraphs is included herewith as Attachment A.

Page 5, Line 19 - Page 6, Line 16

The present invention involves the use of  $C_2F_6$  gas in place of the  $CHF_3$  as a first etchant gas in a two-step P1 notching process. As depicted in Fig. 3, in using a combination of  $C_2F_6$  and argon (designated herein as  $C_2F_6/Ar$ ) as a first etchant gas, etchant species are created that selectively etch the alumina write gap layer preferentially over the NiFe P2 pole tip material. As described in detail hereinbelow, the ion beam of  $C_2F_6/Ar$  etchant gas is preferably directed at a relatively steep angle 60 and subsequently at a relatively shallow angle 64. After the alumina write gap layer has been etched using  $C_2F_6/Ar$  to form notches 66 through the alumina layer 18,